

REMARKS

The final Office Action dated August 30, 2007, and the patents relied on therein have been carefully reviewed, and in view of the above changes and following remarks reconsideration and allowance of all the claims pending in the application are respectfully requested.

Claims 1-40 stand rejected. By this Amendment, claims 1, 15 and 31 have been amended, and claims 1-40 remain pending.

Amendments To The Claims

Applicant has amended claims 1, 15 and 31 to better distinguish the claimed subject matter over the applied art. In particular, claims 1, 15 and 31 have been amended to now require that the claimed filing system comprises information for each data block of the file indicating a number of other files in the filing system that require the data block for providing parity information for rebuilding each of the other files based on a parity calculation. Support for this amendment can be found throughout the specification, for example, at least in paragraph [24] of the originally filed patent application.

The Rejection Under 35 U.S.C. § 103(a) Over Velez-McCaskey In View of Rudoff

Claims 1-3, 5, 6, 8-10 and 12-14 stand rejected under 35 U.S.C. § 103(a) as unpatentable over Velez-McCaskey in view of Rudoff, U.S. Patent No. 6,636,878 B1.

Applicant respectfully traverses this rejection. Applicant respectfully submits that the subject matter according to any of claims 1-3, 5, 6, 8-10 and 12-14 is patentable over Velez-McCaskey in view of Rudoff. Applicant respectfully submits that the system and the device resulting from the combination of Velez-McCaskey and Rudoff is not the claimed subject matter.

To establish a *prima facie* case of obviousness, three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations.

The teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art, not in Applicant's disclosure. See *In re Vaeck*, 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991). (See, also, MPEP §§ 706.02(j) and 2143).

Regarding claim 1 and the third basic criterion for establishing a *prima facie* case of obviousness, Applicant respectfully submits that neither Velez-McCaskey nor Rudoff disclose or suggest the claimed the filing system comprising information for each data block of the file indicating a number of other files in the filing system that require the data block for providing parity information for rebuilding each of the other files based on a parity calculation. The Examiner admits that Velez-McCaskey does not disclose that the storage system stores information about each data block that indicates the number of files that require the data block for rebuilding. (See final Office Action, dated August 30, 2007, page 3, lines 12-14.) For this reason, it follows that Velez-McCaskey does not disclose or suggest the claimed the filing system comprising information for each data block of the file indicating a number of other files in the filing system that require the data block for providing parity information for rebuilding each of the other files based on a parity calculation.

Regarding Rudoff, Applicant respectfully submits that Rudoff, at best, discloses that a data block has an associated "reference count" or "reference value" that is an indicator of how many files are sharing or referring to the data block. (See Rudoff, column 3, lines 59-60, column 6, lines 18-26, column 12, lines 26-31, column 13, line 60, through column 14, line 44, column 14, lines 57- 60, column 19, line 60, through column 20, line 4, column 22, lines 32-43, column 25, lines 32-39, and, Abstract, lines 11-13.) Rudoff is silent regarding the disclosed reference value comprising information for each data block of the file indicating a number of other files in the filing system that require the data block for providing parity information for rebuilding each of the other files based on a parity calculation.

Thus, claim 1 is allowable over Velez-McCaskey in view of Rudoff. It follows that claims 2, 3, 5, 6, 8-10 and 12-14, which incorporate the limitations of claim 1, are each allowable over Velez-McCaskey in view of Rudoff for at least the same reason that claim 1 is considered allowable.

Consequently, Applicant respectfully requests that the Examiner withdraw this rejection and allow claims 1-3, 5, 6, 8-10 and 12-14

**The Rejection Under 35 U.S.C. § 103(a) Over Velez-McCaskey
In View Of Rudoff And Further In View Of Bright**

Claims 4 and 11 stand rejected under 35 U.S.C. § 103(a) as unpatentable over Velez-McCaskey in view of Rudoff as applied to claim 1, and further in view of Bright et al. (Bright), U.S. Patent No. 7,058,819.

Applicant respectfully traverses this rejection. Applicant respectfully submits that the subject matter according to either of claims 4 and 11 is patentable over Velez-McCaskey in view of Rudoff, and further in view of Bright. Applicant respectfully submits that Bright does not cure the deficiencies of Velez-McCaskey in view of Rudoff with respect to claim 1, the base claim of both claims 4 and 11. More specifically, Applicant respectfully submits that Bright does not disclose or suggest the claimed the filing system comprising information for each data block of the file indicating a number of other files in the filing system that require the data block for providing parity information for rebuilding each of the other files based on a parity calculation.

Consequently, Applicant respectfully requests that the Examiner withdraw this rejection and allow claims 4 and 11.

**The Rejection Under 35 U.S.C. § 103(a) Over Velez-McCaskey
In View Of Rudoff And In View Of Gotoh**

Claim 7 stands rejected under 35 U.S.C. § 103(a) as unpatentable over Velez-McCaskey in view of Rudoff as applied to claim 1, and further in view of Gotoh, U.S. Patent No. 6,223,300 B1.

Applicant respectfully traverses this rejection. Applicant respectfully submits that Gotoh does not cure the deficiencies of Velez-McCaskey in view of Rudoff with respect to amended claim 1, the base claim of claim 7. In particular, Gotoh does not disclose or suggest the claimed the filing system comprising information for each data block of the file indicating a number of other files in the filing system that require the data block for providing parity information for rebuilding each of the other files based on a parity calculation.

Consequently, Applicant respectfully requests that the Examiner withdraw this rejection and allow claim 7.

**The Rejection Under 35 U.S.C. § 103(a) Over Velez-McCaskey
In View Of Rudoff And Further In View Of Frey, Jr.**

Claims 15-20, 22, 24-26, 28-36 and 38-40 stand rejected under 35 U.S.C. § 103(a) as unpatentable over Velez-McCaskey in view of Rudoff as applied to claim 1, and further in view of Frey, Jr., U.S. Patent No. 6,742,137 B1.

Applicant respectfully traverses this rejection. Applicant respectfully submits that the subject matter according to any of claims 15-20, 22, 24-26, 28-36 and 38-40 is patentable over Velez-McCaskey in view of Rudoff and further in view of Frey, Jr.

To establish a *prima facie* case of obviousness, three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations.

The teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art, not in Applicant's disclosure. See *In re Vaack*, 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991). (See, also, MPEP §§ 706.02(j) and 2143).

Regarding claim 15 and the third basic criterion for establishing a *prima facie* case of obviousness, Applicant respectfully submits that none of Velez-McCaskey, Rudoff or Frey, Jr. disclose or suggest the claimed filing system comprising information for each data block of the file indicating a number of other files in the filing system that require the data block for providing parity information for rebuilding each of the other files based on a parity calculation. As demonstrated above, neither Velez-McCaskey nor Rudoff disclose or suggest this limitation. Further, Frey, Jr. fails to disclose or suggest the claimed filing system comprising information for each data block of the file indicating a number of other files in the filing system that require the data block for providing parity information for rebuilding each of the other files based on a parity calculation. At best, Frey, Jr. discloses fault tolerance metadata that is maintained for each data object that allows different data objects to be stored with different fault tolerance techniques on the same storage volume. The disclosed fault tolerance metadata for a data object may include information regarding a RAID level or other fault tolerance technique to be used in

storing the data object as well as indications of storage locations for fault tolerance data such as parity disk blocks or mirror image blocks. (See Frey, Jr., column 4, lines 14-21.)

Thus, claim 15 is allowable over Velez-McCaskey in view of Rudoff, and further in view of Frey. It follows that claims 16-20, 22, 24-26 and 28-30, which incorporate the limitations of claim 15, are each allowable for at least the same reason that claim 15 is considered allowable.

Regarding claim 31, Applicant respectfully submits that none of Velez-McCaskey, Rudoff or Frey, Jr. disclose or suggest the claimed filing system comprising information for each data block of the file indicating a number of other files in the filing system that require the data block for providing parity information for rebuilding each of the other files based on a parity calculation. As demonstrated above, none of Velez-McCaskey, Rudoff or Frey, Jr. disclose or

Thus, claim 31 is allowable over Velez-McCaskey in view of Frey, Jr. It follows that claims 32-36 and 38-40, which incorporate the limitations of claim 31, are each allowable for at least the same reason that claim 31 is considered allowable.

Consequently, Applicant respectfully requests that the Examiner withdraw this rejection and allow claims 15-20, 22, 24-26, 28-36 and 38-40.

**The Rejection Under 35 U.S.C. § 103(a) Over Velez-McCaskey
In View Of Rudoff And Further In View of Frey, Jr. And Further In View Of Gotoh**

Claims 21 and 23 stand rejected under 35 U.S.C. § 103(a) as unpatentable over Velez-McCaskey in view of Rudoff as applied to claim 1, and further in view of Frey, Jr. and further in view of Gotoh.

Applicant respectfully traverses this rejection. Applicant respectfully submits that Gotoh does not cure the deficiencies of Velez-McCaskey, Rudoff and Frey, Jr. with respect to claim 15, the base claim of both claims 21 and 23. In particular, none of Velez-McCaskey, Rudoff, Frey, Jr. and Gotoh discloses or suggests the claimed filing system comprising information for each data block of the file indicating a number of other files in the filing system that require the data block for providing parity information for rebuilding each of the other files based on a parity calculation.

Consequently, Applicant respectfully requests that the Examiner withdraw this rejection and allow claims 21 and 23.

**The Rejection Under 35 U.S.C. § 103(a) Over Velez-McCaskey
In View Of Rudoff And Further In View of Frey, Jr. And Further In View Of Bright**

Claims 27 and 37 stand rejected under 35 U.S.C. § 103(a) as unpatentable over Velez-McCaskey in view of Rudoff as applied to claim 1, and further in view of Frey, Jr., and further in view of Bright.

Applicant respectfully traverses this rejection. Applicant respectfully submits that Bright does not cure the deficiencies of Velez-McCaskey, Rudoff and Frey, Jr. with respect to claims 15 and 31, the respective base claims of claims 27 and 37. In particular, none of Velez-McCaskey, Rudoff, Frey, Jr. and Bright discloses or suggests the claimed filing system comprising information for each data block of the file indicating a number of other files in the filing system that require the data block for providing parity information for rebuilding each of the other files based on a parity calculation.

Consequently, Applicant respectfully requests that the Examiner withdraw this rejection and allow claims 27 and 37.

Applicant notes that additional patentable distinctions between Velez-McCaskey, Rudoff, Bright, Gotoh and Frey, Jr. and the rejected claims exist; however, the foregoing is believed sufficient to address the Examiner's rejections. Additionally, failure of Applicant to respond to a position taken by the Examiner is not an indication of acceptance or acquiescence of the Examiner's position. Instead, it is believed that the Examiner's positions are rendered moot by the foregoing and, therefore, it is believed not necessary to respond to every position taken by the Examiner with which Applicant does not agree.

CONCLUSION

In view of the above amendments and argument, it is urged that the present application is now in condition for allowance. Should the Examiner find that a telephonic or personal

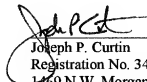
PATENT

interview would expedite passage to issue of the present application, the Examiner is encouraged to contact the undersigned attorney at the telephone number indicated below.

It is requested that this application be passed to issue with claims 1-40.

Respectfully submitted,

Date: November 30, 2007



Joseph P. Curtin
Registration No. 34,571
1469 N.W. Morgan Lane
Portland, OR 97229-5291
(503) 296-8373
(503) 297-0452 (facsimile)